

6. (Amended) The connector element according to Claim 1, wherein the conduit is defined by an inner socket connector.

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7. (Twice Amended) The connector element according to Claim 6, wherein the opening element is defined by a portion of an outer socket connector surrounding the conduit.

14. (Amended) A connector element for connecting a fluid line, preferably a length of tubing, cannulas or catheters to a second connector element, comprising:

a conduit forming a lumen for conveying a flowing medium;

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a sealing part moveable relative to the conduit between a closed position and an open position, adapted for sealing the conduit from an ambient atmosphere when in the closed position;

an opening element to open the sealing part while forming a connection, wherein the sealing part does not contact the conduit either when in the closed position or in the open position;

<sup>not fig 5</sup>  
a shut-off element adapted for sealing the conduit; and

a penetration body movable relative to the shut-off element and adapted for opening the shut-off element when forming the connection, wherein the penetration body is disposed within the conduit.

## REMARKS

### I. Introduction

Claims 1 to 17 are pending in the present application. By this amendment, claims 1, 6, 7 and 14 have been amended. In view of the above amendments and the following remarks, it is

respectfully submitted that claims 1 to 17 are allowable, and reconsideration is respectfully requested.

## II. Response to §112 Rejections

Claims 1-17 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. According to the Examiner, "[t]he term 'conduit' in claims 1-17 is used by the claim to mean the open area within a tube, while the accepted meaning is the tube structure itself (i.e., a lumen is formed by a conduit)." Claim 1 has been amended to recite "a conduit forming a lumen for conveying a flowing medium." Claim 17 has not been amended in this respect because Applicant respectfully submits that nowhere in the claim is the term "conduit" used to mean the open area within a tube. Considering the amendment to claim 1, and the comment regarding claim 17, Applicant respectfully requests that this rejection be withdrawn.

The Examiner has also indicated that phrases in claims 1 and 17 lack antecedent basis. Claim 1 has been amended to overcome any alleged deficiency in this regard. As for claim 17, it is respectfully submitted that "*a* second connector element" is recited in line 5 as opposed to "*the* second connector element" as indicated by the Examiner. [Emphasis added in each instance]. As such there is proper antecedent basis for further recitations of this element.

### III. Response to §102(b) Rejections

Claims 1 to 3, 7 to 13, and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,492,147 ("Challender et al."). Applicant submits that Challender et al. do not anticipate the present claims for the following reasons.

Claim 1 relates to a connector element for connecting a fluid line, preferably a length of tubing, cannulas or catheters to a second connector element. The connector element includes a conduit forming a lumen for conveying a flowing medium. A sealing part is moveable relative to the conduit between a closed position and an open position, and is adapted for sealing the conduit from an ambient atmosphere when in the closed position. An opening element, in the form of an outer socket connector having a diameter that is greater than a diameter of the conduit, is configured to open the sealing part while forming a connection, wherein the opening element prevents the sealing part from contacting the conduit either when in the closed position or in the open position.

Claim 17 recites a method for connecting fluid lines, preferably first and second lengths of tubing, cannulas or catheters. The method includes the step of attaching a first connector element to the first length and a second connector to the second length. Next, claim 17 recites that there is the step of pushing a housing of the second connector element into a housing of the first connector element, so that an outer socket connector of the first connector element acts on a sealing part of the second connector element to open the sealing part of the second connector element, wherein the sealing part of the second connector is movable relative to a conduit of the second connector and the sealing part of the second connector does not contact the conduit of the second connector either when in the closed or open position. Likewise, an outer socket connector of the second connector

element acts on a sealing part of the first connector element to open the sealing part of the first connector element, wherein the sealing part of the first connector is movable relative to a conduit of the first connector and the sealing part of the first connector does not contact the conduit of the first connector either when in the closed or open position. Furthermore, claim 17 recites that there is also the step of further pushing the housing of the second connector element into the housing of the first connector element, so that a recessed inner socket connector of the first connector element forms a continuous conduit with a recessed inner socket connector of the second connector element. Claim 17 also recites that there is the step of further pushing the housing of the second connector element into the housing of the first connector element so that a penetration body of the first connector element opens shut off elements of the first and second connector elements.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

Challender et al. purportedly disclose a dry break connection for joining together opposing passageways. According to Challender et al., the connection has been designed to prevent moisture or liquid from being spilled or remain on opposing ends of the connection when the connection is separated. In the prior Office Action, the Examiner contends that Challender et al.

disclose “a connector element having a conduit, sealing part locked to housing 51, opening element, an annular gap between a housing and an opening element, and a shut-off element 32/70.”

Notwithstanding the Examiner’s contentions, Challender et al. fail to disclose each and every element of Applicant’s invention as set forth in independent claims 1 and 17. This is not surprising considering that the device disclosed by Challender et al. is not specifically designed - as is Applicants device - to provide a sterile connection by keeping a connector element sealed with respect to the ambient atmosphere until a connection is made. Instead, Challender et al. have purportedly disclosed a device that is meant to prevent spillage after disconnection of a coupling. There is no disclosure whatsoever by Challender et al. related to solving the problem considered by Applicant.

Furthermore, Challender et al. do not teach, or even suggest, an opening element, in the form of an outer socket connector having a diameter that is greater than a diameter of the conduit, which is configured to open the sealing part while forming a connection, wherein the opening element prevents the sealing part from contacting the conduit either when in the closed position or in the open position, as described in claim 1. Also, Challender et al. do not describe a method as recited in claim 17 that includes the use of “an inner socket connector” and “an outer socket connector.” As with claim 1, it is the combination of these two elements that creates a passage that segregates the sealing part from the conduit. The described features of claim 1 and 17 allow for a device that has a “sealing part [that can be] guided or opened in such a way as to prevent contact with the areas for conveying the medium in all stages of movement of the sealing part” as outlined in

the application. Page 6, lines 5-8. The device disclosed in Challender et al. fails to teach or even suggest these features.

Applicant also wishes to address the Examiner's contention that "[b]oth sealing parts are movable with respect to their respective conduit lumen as the membrane bursts to open." It respectfully submitted that the "sealing part locked to housing 51" of Challender et al. simply is not capable of "moving relative to the conduit." Instead, the sealing part remains fixed between the exterior wall surface portion 44 and the cylindrical inner wall portion 51 which does not move relative to the conduit. Thus, this portion of the device cannot anticipate the device recited in claim 1.

Since all the features of Applicant's invention are not taught by Challender et al., it is respectfully requested that this rejection is withdrawn as to claims 1 and 17. Moreover, claims 2 to 3 and 7 to 13 ultimately depend from claim 1, contain all the limitations thereof, and should therefore be deemed allowable as well.

#### IV. Response to §103(a) Rejections

Claims 4, 5, 6, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Challender et al. Applicant respectfully submits that Challender et al. does not render these claims obvious.

To render a claim obvious, the prior art must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Moreover, obviousness can only

be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the modification must be found in the prior art and not in the Applicants' disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Claims 4, 5, 6, and 16 ultimately depend from claim 1 and include all of the limitations thereof. Because Challenger et al. does not teach or suggest all of the limitations of claims 4, 5, 6, and 16, it is submitted that these claims are not rendered obvious thereby. In re Fine, *supra* (any dependent claim that depends from a non-obvious independent claim is non-obvious).

V. Allowable Subject Matter

Applicant notes with appreciation the Examiner's finding of allowable subject matter in claims 14 and 15. Claim 14 has been rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph (discussed above) and to include all of the limitations of the base claim and any intervening claims. Claim 15 depends from claim 14. Therefore, Applicant maintains that claims 14 and 15 are in condition for immediate allowance.

VI. Conclusion

Attached hereto is a marked-up version of the changes made to the Specification and claims by the current Amendment. The attached page is captioned "**Version with Markings t Show Changes Made.**"

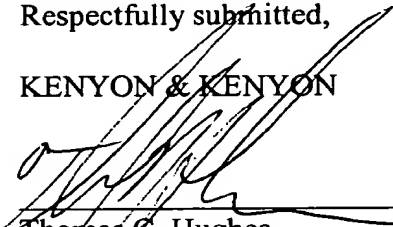
Applicant submits that this application is in condition for allowance and respectfully requests that such action be taken. If for any reason the Examiner believes that prosecution of this application would be advanced by contact with the Applicant's representative, the Examiner is invited to contact the undersigned at the telephone number given below.

Respectfully submitted,

KENYON & KENYON

Dated: May 15, 2002

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**Version with Markings to Show Changes Made**

**IN THE CLAIMS:**

Claims 1, 6, 7 and 14 have been amended as follows:

1. (Twice Amended) A connector element for connecting a fluid line, preferably a length of tubing, cannulas or catheters to a second connector element, comprising:
  - a conduit forming a lumen for conveying a flowing medium;
  - a sealing part moveable relative to the conduit between a closed position and an open position, adapted for sealing the conduit from an ambient atmosphere when in the closed position; and
  - an opening element including an outer socket connector having a diameter that is greater than a diameter of the conduit, the opening element configured to open the sealing part while forming [the] a connection, wherein the opening element prevents the sealing part from contacting [does not contact] the conduit either when in the closed position or in the open position.
6. (Once Amended) The connector element according to Claim 1, wherein the conduit [for conveying a flowing medium] is defined by an inner socket connector.
7. (Twice Amended) The connector element according to Claim 6, wherein the opening element is defined by a portion of an outer socket connector surrounding the conduit [for conveying the medium].
14. (Amended) [The connector element according to Claim 13] A connector element for connecting a fluid line, preferably a length of tubing, cannulas or catheters to a second connector element, comprising:
  - a conduit forming a lumen for conveying a flowing medium;

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a sealing part moveable relative to the conduit between a closed position and an open position, adapted for sealing the conduit from an ambient atmosphere when in the closed position;  
an opening element to open the sealing part while forming a connection, wherein the sealing part does not contact the conduit either when in the closed position or in the open position;  
a shut-off element adapted for sealing the conduit; and  
a penetration body movable relative to the shut-off element and adapted for opening the shut-off element when forming the connection, wherein the penetration body is disposed within the conduit [inner socket connector].